

# Notice of Allowability

Application No.

09/926,498

Examiner

Susan Y. Chen

Applicant(s)

GUEGUEN ET AL.

Art Unit

2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/20/06.
2. ☒ The allowed claim(s) is/are 10 and 12-20.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 20, 2006 has been entered.

## **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Applicant's attorney Joseph Wrkich on July 03, 2006.

### **Amendment:**

To the Application received on March 20, 2006 please modify the following:

Claim 10 (Currently Amended): A digital transmission method of an error correction coding, comprising:

observing transmission conditions on a communication channel continuously to detect at least one dynamic parameter of a current transmission condition on the communication channel;

selecting dynamically, as a function of the at least one dynamic parameter, a distribution of elementary coding step redundancies from a plurality of distributions of elementary coding step redundancies for which a global efficiency of a coding scheme resulting from a serial concatenation of an elementary coding step is equal to a predetermined target efficiency, said predetermined target efficiency being determined by a product of efficiencies of at least two elementary coding steps modified by corresponding puncturing steps,

corresponding with a given transmission condition, the plurality of distributions of elementary coding step redundancies are stored in a reference table, wherein each stored redundancy of the distribution coding step is characterized for optimizing the best transmission performance without modification of the target efficiency;

performing a coding procedure including the at least two elementary coding steps concatenated in series with corresponding puncturing steps, and an interleaving step between said at least two elementary coding steps, each of said at least two elementary coding steps adding at least one redundancy bit to data including a sequence of at least one bit by applying the selected distribution of elementary coding step redundancies to generate a coded data including said data and the at least one redundancy bit for a transmission of the coded data over a channel;  
and

performing an iterative decoding procedure including at least two elementary decoding steps, deinterleaving and depuncturing steps, and puncturing and interleaving steps corresponding to said at least two elementary decoding steps to obtain, from said coded data, an estimation of said data.

Claim 21 (Currently Canceled)

***Allowable Subject Matter***

Claims 10 and 12-20 are allowed.

The following is an examiner's statement of reasons for allowance:

Claim 10 is allowable because the prior art on record or that encountered in searching for the invention, fails to disclose or suggest the features of instant invention – a digital transmission method to correct error coding having a global efficiency of a coding scheme resulting from a serial concatenation of an elementary coding step that is equal to a predetermined target efficiency, said predetermined target efficiency being determined by a product of efficiencies of at least two elementary coding steps modified by corresponding puncturing steps such that corresponding with a given transmission condition, the plurality of distributions of elementary coding step redundancies are stored in a reference table, wherein each stored redundancy of the distribution coding step is characterized for optimizing the best transmission performance without modification of the target efficiency in a combination as recited by applicant.

Claims 12-20, depend from claims 10 respectively, therefore, are allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Y. Chen whose telephone number is 571-272-4016. The examiner can normally be reached on Monday - Friday from 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Susan Y Chen  
Examiner  
Art Unit 2161

July 5, 2006



**UYEN LE**  
**PRIMARY EXAMINER**